



# Mineral water trails

## BONIFACIUS

NATURAL MINERAL SPRING

### NAME

The name Bonifacius stems from the Latin and means *benefactor*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, sodium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 510 mg/l  |
| Potassium K <sup>+</sup>                         | 31 mg/l   |
| Calcium Ca <sup>2+</sup>                         | 790 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 96 mg/l   |
| Iron Fe <sup>2+</sup>                            | 11 mg/l   |
| Chloride Cl <sup>-</sup>                         | 25 mg/l   |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 3920 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 187 mg/l  |

### PARTICULARITIES

The highly mineralised water of the Bonifacius spring primarily contains lots of calcium and iron.

Calcium is needed to maintain normal bones and teeth. In dissolved form, it contributes to normal energy metabolism, normal muscle function, blood clotting and signal transmission between nerve cells. The average daily requirement for an adult is 800 milligrams.

Iron in dissolved form contributes to the normal formation of red blood cells and haemoglobin and thus to normal oxygen transport in the body. It also plays an important role in the normal functioning of the immune system and reduces fatigue. The average daily requirement for an adult is 14 milligrams.

A huge tufa has formed at the overflow into the Inn. The conspicuous orange-reddish colour is evidence of the iron content of the water.

«Water is best.»

Pindar (ca. 520 – 446 B.C.)



# Mineral water trails

## CAROLA

NATURAL MINERAL SPRING

### NAME

The Carola spring bears the name of Queen Carola of Saxony (1833 – 1907), who was a welcome guest in Tarasp at the end of the 19th century.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, calcium, hydrogen carbonate and chloride

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 1030 mg/l |
| Potassium K <sup>+</sup>                         | 56 mg/l   |
| Calcium Ca <sup>2+</sup>                         | 515 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 112 mg/l  |
| Chloride Cl <sup>-</sup>                         | 551 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 3090 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 599 mg/l  |

### PARTICULARITIES

The Carola spring was discovered by chance in 1862 by blasting work for the bridge leading over the Inn and has been tapped ever since. A new catchment in a ten metre deep well shaft followed in the 1920s.

The mineral water was formerly used exclusively for bathing purposes, which is why it was pumped over to the baths of the spa.

*«The soul of man mortal,  
how art thou like water!  
Fate of man mortal,  
how wert thou like wind!»*

Johann Wolfgang von Goethe (1749 – 1832)



# Mineral water trails

## CHALZINA SURA

NATURAL MINERAL SPRING

### NAME

The origin of the name Chalzina is questionable. It is certain, however, that it has nothing to do with the Romansh *chaltshina*, or *limestone* in English.

In Romansh *sura* means *above*. This distinguishes it from the Chalzina spring, which emerges further down the valley.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                     |           |
|-------------------------------------|-----------|
| Calcium $\text{Ca}^{2+}$            | 319 mg/l  |
| Magnesium $\text{Mg}^{2+}$          | 24 mg/l   |
| Iron $\text{Fe}^{2+}$               | 12 mg/l   |
| Hydrogen carbonate $\text{HCO}_3^-$ | 1040 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 44 mg/l   |

### PARTICULARITIES

The water of the Chalzina Sura spring contains lots of iron, but is otherwise relatively weakly mineralised and not used.

The main source is located on the right bank of the Chalzina stream. The smaller sources in the terrain are an interesting feature. Intense red deposits (iron oxide in combination with calcium) have formed there which contrast attractively with the green of the surroundings in summer and with the ice and snow in winter.

«*Water is the origin of all things*»

Thales of Miletus (ca. 625 – ca. 546 B.C.)



# Mineral water trails

## CHALZINA

NATURAL MINERAL SPRING

### NAME

The origin of the name Chalzina is questionable. It is certain, however, that it has nothing to do with the Romansh *chalt schina*, or *limestone* in English.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium and hydrogen carbonate

### MAIN COMPONENTS

|                                                  |          |
|--------------------------------------------------|----------|
| Sodium Na <sup>+</sup>                           | 15 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 265 mg/l |
| Magnesium Mg <sup>2+</sup>                       | 39 mg/l  |
| Chloride Cl <sup>-</sup>                         | 37 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 884 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 32 mg/l  |

### PARTICULARITIES

The Chalzina spring is located about 60 metres from this site on the right bank of the Chalzina stream and is fed together with the water from the Tulai spring to the village fountain of Bügl Grond and for bathing purposes to the Bogn Engiadina.

Since the water of the Chalzina spring is not very strongly mineralised, it can be recommended – together with the water of the Tulai spring – as «beginners' mineral water». It has a pleasant taste and the natural carbonic acid has a refreshing effect.

*«Be praised, My Lord,  
through Sister Water;  
she is very useful, and humble,  
and precious, and pure.»*

Franz of Assisi (1181 – 1226)



# Mineral water trails

## CLOZZA

NATURAL MINERAL SPRING

### NAME

The Clozza spring has its source in the valley by the same name, Val Clozza. The name stems from the Gallic word meaning *depression in the ground or ditch*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                     |           |
|-------------------------------------|-----------|
| Calcium $\text{Ca}^{2+}$            | 346 mg/l  |
| Magnesium $\text{Mg}^{2+}$          | 47 mg/l   |
| Iron $\text{Fe}^{2+}$               | 4 mg/l    |
| Hydrogen carbonate $\text{HCO}_3^-$ | 1160 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 109 mg/l  |

### PARTICULARITIES

The spring was discovered in 1925 during construction work in Val Clozza. To protect it from flooding, it was newly contained in 2005 and fitted with a viewing window. This feature with a lid shows the Clozza spring in its natural state, where the water emerges from the rock.

Since time immemorial, the mineral water has been fed to the «Squirrel Fountain», at the Clozza Bridge near the hospital, where it can be tasted.

*«I want to be as serene as water,  
it flows wherever a way opens up.»*

Andri Peer (1921 – 1985)



# Mineral water trails

## FUNTANA COTSCHNA

NATURAL MINERAL SPRING

### NAME

As applies to all the mineral springs in the area, the water of the Funtana Cotschna, in English *Red Spring*, is ferruginous. The iron oxidises in the air upon leaving the source and provides the limestone sinter with a red colour.

### TYPE OF SPRING

Water with calcium and sulphate

### MAIN COMPONENTS

|                                     |          |
|-------------------------------------|----------|
| Calcium $\text{Ca}^{2+}$            | 190 mg/l |
| Magnesium $\text{Mg}^{2+}$          | 41 mg/l  |
| Fluoride $\text{F}^-$               | 1.8 mg/l |
| Hydrogen carbonate $\text{HCO}_3^-$ | 154 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 478 mg/l |

### PARTICULARITIES

The water of the Funtana Cotschna does not have a very distinctive taste compared to other mineral waters.

If you look over the Lischana stream to the rock face, the overflow of the Funtana Cotschna is sometimes seen as a waterfall.

The water of the Funtana Cotschna is channelled into the valley and turbinised there to produce electricity. It is also fed into the drinking water network in case of a water shortage.

«*The mountain waters tell me marvelous tales during the night.*»

Ludwig Tieck (1773 – 1853)



# Mineral water trails

## EMERITA

NATURAL MINERAL SPRING

### NAME

The Emerita spring bears the name of one of the first Christian missionaries in Rhaetia.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, hydrogen carbonate and chloride

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 3410 mg/l |
| Potassium K <sup>+</sup>                         | 147 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 238 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 170 mg/l  |
| Iron Fe <sup>2+</sup>                            | 8 mg/l    |
| Chloride Cl <sup>-</sup>                         | 1990 mg/l |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 5890 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 1390 mg/l |

### PARTICULARITIES

Emerita is one of the most heavily mineralised springs in Europe. The sum of dissolved substances is 13,300 milligrams per litre.

The water of the Emerita spring contains particularly high levels of chloride. It also contains a high level of sulphates.

Large quantities should not be consumed without medical advice – especially in the case of stomach and intestinal diseases.

In 1838 the Emerita spring was first tapped. In 1899 – as for the Lucius spring – the catchment with the glass dome was created in the Büvetta Tarasp drinking hall.

*«Lo! Water has also taught you that it is good to strive downwards, to sink and seek depth.»*

Hermann Hesse (1877 – 1962)



# Mineral water trails

## FUSCHNA

NATURAL MINERAL SPRING

### NAME

The name Fuschna stems from the Latin *faux*, which mean *abyss* or *bottleneck*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 125 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 765 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 79 mg/l   |
| Iron Fe <sup>2+</sup>                            | 8 mg/l    |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 2940 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 90 mg/l   |

### PARTICULARITIES

The water of the Fuschna spring contains particularly high levels of calcium, but it is not tapped.

In the small pond on the left, rising bubbles of carbon dioxide can be observed. There is a second source of the Fuschna spring on the right side. Near the wooden jetty, small watercourses with a precipitation of red mud (iron hydroxides) can be seen, which are bordered by black algae.

«Yet the source will always prevail.»

Eduard Mörike (1804 – 1875)



# Mineral water trails

## LISCHANA

NATURAL MINERAL SPRING

### NAME

The Lischana spring is named after the valley where it originates, Val Lischana. Lischana is derived from a personal name that no longer exists today.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, magnesium, hydrogen carbonate, sulphate and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 1680 mg/l |
| Potassium K <sup>+</sup>                         | 71 mg/l   |
| Calcium Ca <sup>2+</sup>                         | 310 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 652 mg/l  |
| Iron Fe <sup>2+</sup>                            | 17 mg/l   |
| Chloride Cl <sup>-</sup>                         | 192 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 6340 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 1660 mg/l |

### PARTICULARITIES

The highly mineralised water of the Lischana spring contains lots of iron and magnesium, which is why the spring is very popular among athletes.

Magnesium is needed to maintain normal bones and teeth. In its dissolved form, it contributes to the normal functioning of muscles and the nervous system and reduces fatigue. The average daily requirement for an adult is 375 milligrams.

A first catchment was made in 1930, and after temporarily drying-up, the spring was re-contained in 1981 at a depth of 57 metres.

The water of the Lischana spring has an arsenic content that exceeds the maximum level for arsenic in drinking water. The water is treated by means of a filter system that reduces the arsenic content below this limit so that it meets the legal requirements for drinking water and can be consumed without any concern.

*«This water was indeed a different thing from ordinary nourishment. It was good for the heart, like a present.»*

Antoine de Saint-Exupéry (1900 – 1944)



# Mineral water trails

## LUCIUS

NATURAL MINERAL SPRING

### NAME

Lucius was one of the first Christian missionaries in Rhaetia.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, hydrogen carbonate, chloride and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 3680 mg/l |
| Potassium K <sup>+</sup>                         | 156 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 612 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 179 mg/l  |
| Iron Fe <sup>2+</sup>                            | 7 mg/l    |
| Chloride Cl <sup>-</sup>                         | 2180 mg/l |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 6770 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 1520 mg/l |

### PARTICULARITIES

Lucius is considered the spring with the most highly mineralised water in Europe. The sum of dissolved substances is 15,100 milligrams per litre.

The water of the Lucius spring contains particularly high levels of calcium, chloride and sulphate.

Calcium is needed for the maintenance of bones and teeth and for energy metabolism. In its dissolved form it contributes to normal muscle function, blood clotting and normal signal transmission between nerve cells. The average daily requirement for an adult is 800 milligrams.

Chloride contributes to normal digestion by forming stomach acid. The salty taste is due to the combination of sodium and chloride (sodium chloride is the same as table salt).

Large quantities should not be consumed without medical advice – especially in the case of stomach and intestinal diseases.

«There are as many waters as the soils they flow through.»

Aristotle (384 – 322 B.C.)



# Mineral water trails

## RABLÖNCH

NATURAL MINERAL SPRING

### NAME

The name Rablönch is derived from the two Latin terms *rovina* and *longus*. *Rovina* stands for *landslide* or *rock fall*. *Longus* means *long*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                                  |            |
|--------------------------------------------------|------------|
| Sodium Na <sup>+</sup>                           | 55 mg/l    |
| Calcium Ca <sup>2+</sup>                         | 442 mg/l   |
| Magnesium Mg <sup>2+</sup>                       | 43 mg/l    |
| Iron Fe <sup>2+</sup>                            | 6 mg/l     |
| Arsenic A                                        | 0.026 mg/l |
| Chloride Cl <sup>-</sup>                         | 34 mg/l    |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 1540 mg/l  |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 52 mg/l    |

### PARTICULARITIES

The Rablönch spring is contained at the top of the meadow and channelled under the road. On the other side, the mineral water flows into the light forest and forms an orange-reddish landscape.

The Rablönch spring was formerly called *Talur spring*, as is the area a little further east.

«He makes springs pour water into the ravines;  
it flows between the mountains.»

Psalm 104



# Mineral water trails

## RUNÀ

NATURAL MINERAL SPRING

### NAME

The name Runà stems from the Latin *rovina*, which means *landslide* or *rock fall*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 170 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 805 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 47 mg/l   |
| Iron Fe <sup>2+</sup>                            | 10 mg/l   |
| Chloride Cl <sup>-</sup>                         | 174 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 2540 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 283 mg/l  |

### PARTICULARITIES

The water of the Runà spring primarily contains lots of calcium, but it is not tapped.

The source of the Runà spring was originally located at the upper end of the tufa. After the construction of the farmhouse, which is located just above, the water reappeared in its cellar. When the connection between the Sent road and the bypass street was built, the water no longer resurfaced. After some time, however, the spring again gushed out of the ground at a new location, where it still emerges today. However, the amount of fill is much higher than before. For this reason the tufa is now growing at a much faster rate and has already reached an impressive size.

«Open the clouded gaze to reveal the thousand springs around the thirsty one in the desert!»

Johann Wolfgang von Goethe (1749 – 1832)



# Mineral water trails

## SAN JON DADAINT

NATURAL MINERAL SPRING

### NAME

The name of St. John, in Romansh *San Jon*, is a common identification and location name. *Dadaint* means *inside* or *within* and in this case signifies *further into the valley*.

### MAIN COMPONENTS

|                                     |          |
|-------------------------------------|----------|
| Calcium $\text{Ca}^{2+}$            | 116 mg/l |
| Magnesium $\text{Mg}^{2+}$          | 36 mg/l  |
| Hydrogen carbonate $\text{HCO}_3^-$ | 325 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 163 mg/l |

### PARTICULARITIES

The San Jon Dadaint untapped mineral spring consists of a spring complex with several sources in the form of ponds. The sediment is coloured red by iron oxide deposits. The water from two of these sources seeps away again after a short flow distance of only six metres. The largest part of the spring complex is formed by a spring stream, which exudes stair-like limestone sinter deposits before seeping away again after about 60 metres.

In the immediate vicinity, between the individual sources, there are several formations of lady's slipper (*Cypripedium calceolus*) with numerous flowering shoots.

In summer, the spring ponds can temporarily dry out, which is why small animal species with an adapted life cycle primarily exist here.

«Resound the praise of God our Lord!  
Ye purling fountains, tune his praise,  
and wave your tops, ye pines!»

From the oratorio «The Creation» by Joseph Haydn (1732 – 1809)

# SPRING HABITAT

## SPRINGS – SPECIAL WATERS

Cool, consistent water temperature, oxygen- and nutrient-poor groundwater provide a habitat for specialised species.

## BIODIVERSITY

- Turbellaria, small crabs
- Caddisflies and stoneflies
- Grass frog
- Mosses and flowering plants

The fat leaf, a carnivorous plant, can «catch» insects with its sticky leaves and digest them. It generally likes damp locations.

To protect themselves, caddisfly larvae build a quiver by sticking plant particles and small stones together with the help of spider secretion.



Pinguicula alpina, fat leaf, © Daniel Küry



Pseudopsilopteryx, caddisfly, © Verena Lubini



Dictyogenus fontium, stonefly larvae, © Daniel Küry

## HAZARD AND PROTECTION

With increasing pressure of use and climate change, the number of near-natural springs is dwindling. Human and livestock footfalls impair these sensitive habitats.

Dismantling abandoned catchments, ensuring sufficient residual water in new catchments, fencing off spring areas are measures to protect and upgrade sensitive spring areas.



# Mineral water trails

## SFONDRAZ

NATURAL MINERAL SPRING

### NAME

The name Sfondraz is derived from the Romansh verb *sfuondrar*, meaning *to sink in*, *sink down*, and refers to the well-known slope instabilities in the area.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, calcium, hydrogen carbonate, chloride and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 1310 mg/l |
| Potassium K <sup>+</sup>                         | 75 mg/l   |
| Calcium Ca <sup>2+</sup>                         | 592 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 102 mg/l  |
| Iron Fe <sup>2+</sup>                            | 8 mg/l    |
| Chloride Cl <sup>-</sup>                         | 846 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 3740 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 693 mg/l  |

### PARTICULARITIES

The highly mineralised water of the Sfondraz spring contains particularly high levels of chloride. In dissolved form, chloride contributes to normal digestion by forming stomach acid.

The Sfondraz spring was used for bathing purposes in the Nairs spa and therefore called the *New Bathing Spring* when it was discovered. In 1966 a separate drinking hall, the Büvetta Sfondraz, was built for the spring. However, it was not worth the effort for long, and the drinking hall was closed again in the 1980s. In 2004, the building found a new purpose and has been used as a garden café ever since. When it is open, the water from the Sfondraz spring can still be tasted today.

The mineral water supposedly comes from the other side of the valley and is said to flow under the Inn. The deposits of the overflow to the Inn form an orange-reddish tufa.

*«It never rests, by day or night,  
but is always intent on wandering, the water.»*

Wilhelm Müller (1794 – 1827)



# Mineral water trails

## SOTSASS

NATURAL MINERAL SPRING

### NAME

The term Sotsass means *under the rock* (Latin *saxus* for *rock*) and describes the source of the spring.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

### MAIN COMPONENTS

|                                     |           |
|-------------------------------------|-----------|
| Calcium $\text{Ca}^{2+}$            | 491 mg/l  |
| Magnesium $\text{Mg}^{2+}$          | 31 mg/l   |
| Iron $\text{Fe}^{2+}$               | 3 mg/l    |
| Hydrogen carbonate $\text{HCO}_3^-$ | 1640 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 52 mg/l   |

### PARTICULARITIES

The Sotsass spring, formerly known as *Florins spring*, has been known at least since the 17th century. In 1877 a proper catchment was built. The pavilion, built at the same time, of which the masonry with the round arch still bears witness today, was demolished in the 1940s due to vandalism.

Shortly after 1900, the water from the Sotsass spring was channelled into the former Quadras bathhouse. Today, the mineral water is used in the Bogn Engiadina.

«Can you not hear the brooks running  
amongst the stones and flowers?»

Joseph von Eichendorff (1788 – 1857)



# Mineral water trails

## STRON

NATURAL MINERAL SPRING

### NAME

The name Stron stems from the Latin *extraneus*, which means *outdoors, outside*.

### MAIN COMPONENTS

|                                     |           |
|-------------------------------------|-----------|
| Calcium $\text{Ca}^{2+}$            | 97 mg/l   |
| Magnesium $\text{Mg}^{2+}$          | 33 mg/l   |
| Iron $\text{Fe}^{2+}$               | 0.31 mg/l |
| Hydrogen carbonate $\text{HCO}_3^-$ | 377 mg/l  |
| Sulphate $\text{SO}_4^{2-}$         | 71 mg/l   |

### PARTICULARITIES

The water of the Stron spring no longer flows at the village fountain by the same name. It has found a new path, underground for the time being – maybe it will come to the surface again sometime in another place.

In order to make reference to the fact that the Sent fraction is also characterised by springs, the village fountain with the separate collecting basin for the mineral water has remained intact. It also shows how sensitive the springs are: new ones appear, but old ones also disappear – both caused by natural or human influences.

«*The important rivers require the small water bodies.*»

Albert Schweitzer (1875 – 1965)



# Mineral water trails

## FUNTANA DA SUOLPER

NATURAL MINERAL SPRING

### NAME

*Suolper* is the Romansh term for *sulphur*. The sulphate content of the water is not very high, but the typical smell of hydrogen sulphide is noticeable («rotten eggs») near the spring.

### MAIN COMPONENTS

|                                                  |          |
|--------------------------------------------------|----------|
| Sodium Na <sup>+</sup>                           | 21 mg/l  |
| Calcium Ca <sup>2+</sup>                         | 50 mg/l  |
| Chloride Cl <sup>-</sup>                         | 42 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 100 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 45 mg/l  |

### PARTICULARITIES

The water of the Funtana da Suolper, also called *Tarasp Sulphur Spring*, is weakly mineralised.

It is said that this water was formerly used for baths against joint pain. The construction of a pipeline to the spa house was planned but never carried out. Until today the spring is simply enclosed by a metal pipe.

«*The mineral and warm waters that spring up from the Alps are no less wonderful.*»

Placidus à Spescha (1752 – 1833)



# Mineral water trails

## TULAI

NATURAL MINERAL SPRING

### NAME

The name Tulai stems from the Latin *taeduletum*, which means *pine forest*.

### TYPE OF SPRING

Naturally carbonated mineral water with calcium and hydrogen carbonate

### MAIN COMPONENTS

|                                     |          |
|-------------------------------------|----------|
| Calcium $\text{Ca}^{2+}$            | 223 mg/l |
| Magnesium $\text{Mg}^{2+}$          | 34 mg/l  |
| Chloride $\text{Cl}^-$              | 17 mg/l  |
| Hydrogen carbonate $\text{HCO}_3^-$ | 743 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 39 mg/l  |

### PARTICULARITIES

The Tulai spring emerges from the meadow above the old spa route and together with the water from the Chalzina spring it is fed to the village fountain Bügl Grond and for bathing purposes to the Bogn Engiadina.

In earlier centuries the pipes were made of larch wood; since 1891 cast iron is used. Today, plastic pipes are sometimes also used.

«Water is good; it benefits all things and does not compete with them.»

Lao Tse (6th century B.C.)



# Mineral water trails

## ULRICH

NATURAL MINERAL SPRING

### NAME

The mineral springs in Val Sinestra bear the first names of individuals who played an important role in the containment of the springs and the founding of the spa.

Duri (Romansh for *Ulrich*) Pinösch, together with Gian Töndury, founded the consortium Töndury, Pinösch & Cie., which had the springs contained and built the spa hotel in Val Sinestra in 1904.

### TYPE OF SPRING

Naturally carbonated mineral water with sodium, calcium, hydrogen carbonate, chloride, arsenic and iron

### MAIN COMPONENTS

|                                                  |           |
|--------------------------------------------------|-----------|
| Sodium Na <sup>+</sup>                           | 1063 mg/l |
| Potassium K <sup>+</sup>                         | 73 mg/l   |
| Calcium Ca <sup>2+</sup>                         | 571 mg/l  |
| Magnesium Mg <sup>2+</sup>                       | 102 mg/l  |
| Iron Fe <sup>2+</sup>                            | 10 mg/l   |
| Arsenic A                                        | 3.58 mg/l |
| Chloride Cl <sup>-</sup>                         | 858 mg/l  |
| Hydrogen carbonate HCO <sub>3</sub> <sup>-</sup> | 3130 mg/l |
| Sulphate SO <sub>4</sub> <sup>2-</sup>           | 344 mg/l  |

### PARTICULARITIES

The highly mineralised water of the Ulrich spring was formerly used for baths for skin, sexual and blood diseases, joint complaints and for convalescence.

The mineral springs of Val Sinestra were known especially for their high arsenic content. The water of the Ulrich spring exceeds the current maximum value for arsenic in drinking water by approximately 360 times and is therefore no longer used.

Together with the Eduard and Adolf springs, the source of the Ulrich spring is located in the nearby former drinking hall, which was destroyed by natural forces.

*«Because water has no want and goes where it will, it achieves its objective.»*

Lao Tse (6th century B.C.)



# Mineral water trails

## VI

### NATURAL MINERAL SPRING

#### NAME

Vi stems from the Latin *vicus*, which means *village*. A part of the old village centre in Scuol Sura (*Upper Scuol*) is also called Vi.

#### TYPE OF SPRING

Naturally carbonated mineral water with calcium, hydrogen carbonate and iron

#### MAIN COMPONENTS

|                                     |           |
|-------------------------------------|-----------|
| Calcium $\text{Ca}^{2+}$            | 384 mg/l  |
| Magnesium $\text{Mg}^{2+}$          | 24 mg/l   |
| Iron $\text{Fe}^{2+}$               | 8 mg/l    |
| Hydrogen carbonate $\text{HCO}_3^-$ | 1280 mg/l |
| Sulphate $\text{SO}_4^{2-}$         | 14 mg/l   |

#### PARTICULARITIES

The mineral spring, known since the 16th century, emerges from a mighty tufa hill. A 36-metre tunnel was drilled to tap the spring.

A report from 1832 mentions a drinking bower and a small bathhouse. In 1877 a pavilion was built on the tufa hill, which was demolished in the 1940s due to vandalism.

The water of the Vi spring had been fed to the Quadras bathhouse since 1879 and is still used in the Bogn Engiadina mineral bath today.

The Vi Spring was occasionally called the *Campell spring*, after the Grisons chronicler Duri Campell or Durich Chiampell (ca. 1510 – ca. 1582). Furthermore, different spellings such as Wy or Vih were used.

«The burning summer does not dry the deep springs, only the shallow streams.»

Psalm 104